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- <110> Yosef, Shaul -Zemel, Romi
 - <120> HEPATITIS B VIRUS BINDING PROTEINS AND USES THEREOF
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<213> Homo sapiens

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His Arg Ile Gln Cys Ala Ala Gly Tyr Glu Gln Ser Glu His Asn Val 50 55 60

Cys Gln Asp Ile Asp Glu Cys Thr Ala Gly Thr His Asn Cys Arg Ala 65 70 75 80

Asp Gln Val Cys Ile Asn Leu Arg Gly Ser Phe Ala Cys Gln Cys Pro 85 90 95

Pro Gly Tyr Gln Lys Arg Gly Glu Gln Cys Val Asp Ile Asp Glu Cys
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Thr Ile Pro Pro Tyr Cys His Gln Arg Cys Val Asn Thr Pro Gly Ser 115 120 125

Phe Tyr Cys Gln Cys Ser Pro Gly Phe Gln Leu Ala Ala Asn Asn Tyr 130 135 140

Thr Cys Val Asp Ile Asn Glu Cys Asp Ala Ser Asn Gln Cys Ala Gln 145 150 155 160

Gln Cys Tyr Asn Ile Leu Gly Ser Phe Ile Cys Gln Cys Asn Gln Gly 165 170 175

Tyr Glu Leu Ser Ser Asp Arg Leu Asn Cys Glu Asp Ile Asp Glu Cys 180 185 190

Arg Thr Ser Ser Tyr Leu Cys Gln Tyr Gln Cys Val Asn Glu Pro Gly
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Lys Phe Ser Cys Met Cys Pro Gln Gly Tyr Gln Val Val Arg Ser Arg 210 215 220

Thr Cys Gln Asp Ile Asn Glu Cys Glu Thr Thr Asn Glu Cys Arg Glu 225 230 235 240

Asp Glu Met Cys Trp Asn Tyr His Gly Gly Phe Arg Cys Tyr Pro Arg 245 250 255

Asn Pro Cys Gln Asp Pro Tyr Ile Leu Thr Pro Glu Asn Arg Cys Val 260 265 270

Cys Pro Val Ser Asn Ala Met Cys Arg Glu Leu Pro Gln Ser Ile Val 275 280 285

Tyr Lys Tyr Met Ser Ile Arg Ser Asp Arg Ser Val Pro Ser Asp Ile 290 295 300

Phe Gln Ile Gln Ala Thr Thr Ile Tyr Ala Asn Thr Ile Asn Thr Phe 305 310 315

Arg Ile Lys Ser Gly Asn Glu Asn Gly Glu Phe Tyr Leu Arg Gln Thr 325 330 335

Ser Pro Val Ser Ala Met Leu Val Leu Val Lys Ser Leu Ser Gly Pro 340 345 350

Arg Glu His Ile Val Asp Leu Glu Met Leu Thr Val Ser Ser Ile Gly 355 360

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Ile Pro Glu Ala Cys Arg Gly Asp Met Met Cys Val Asn Gln Asn Gly
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Gly Tyr Leu Cys His Ser Arg Thr Asn Pro Val Tyr Arg Gly Pro Tyr 65 70 75 80

Ser Asn Pro Tyr Ser Thr Pro Tyr Ser Gly Pro Tyr Pro Ala Ala Ala 85 90 95

Pro Pro Leu Ser Ala Pro Asn Tyr Pro Thr Ile Ser Arg Pro Leu Ile 100 105 110

Cys Arg Phe Gly Tyr Gln Met Asp Glu Ser Asn Gln Cys Val Asp Val 115 120 125 Asp Glu Cys Ala Thr Asp Ser His Gln Cys Asn Pro Thr Gln Ile Cys 130 135 140

Ile Asn Met Lys Gly Gly Tyr Thr Cys Ser Cys Thr Asp Gly Tyr Trp 145 150 155 160

Leu Leu Glu Gly Gln Cys Leu Asp Ile Asp Glu Cys Arg Tyr Gly Tyr 165 170 175

Cys Gln Gln Leu Cys Ala Asn Val Pro Gly Ser Tyr Ser Cys Thr Cys 180 185 190

Asn Pro Gly Phe Thr Leu Asn Glu Asp Gly Arg Ser Cys Gln Asp Val 195 200 205

Asn Glu Cys Ala Thr Glu Asn Pro Cys Val Gln Thr Cys Val Asn Thr 210 215 220

Tyr Gly Ser Phe Ile Cys Arg Cys Asp Pro Gly Tyr Glu Leu Glu Glu 225 230 235 240

Asp Gly Val His Cys Ser Asp Met Asp Glu Cys Ser Phe Ser Glu Phe 245 250 255

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Cys Pro Pro Gly Tyr Ile Leu Leu Asp Asp Asn Arg Ser Cys Gln Asp 275 280 285

Ile Asn Glu Cys Glu His Arg Asn His Thr Cys Asn Leu Gln Gln Thr 290 295 300

Cys Tyr Asn Leu Gln Gly Gly Phe Lys Cys Ile Asp Pro Ile Arg Cys 305 310315320

Glu Glu Pro Tyr Leu Arg Ile Ser Asp Asn Arg Cys Met Cys Pro Ala 325 330 335

Glu Asn Pro Gly Cys Arg Asp Gln Pro Phe Thr Ile Leu Tyr Arg Asp 340 345 350

Met Asp Val Val Ser Gly Arg Ser Val Pro Ala Asp Ile Phe Gln Met 355 360 365

Gln Ala Thr Thr Arg Tyr Pro Gly Ala Tyr Tyr Ile Phe Gln Ile Lys 370 375 380

Ser Gly Asn Glu Gly Arg Glu Phe Tyr Met Arg Gln Thr Gly Pro Ile 385 390 395 400

Ser Ala Thr Leu Val Met Thr Arg Pro Ile Lys Gly Pro Arg Glu Ile

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Pro Asp Ser Tyr Thr Glu Cys Thr Asp Gly Tyr Thr Gln Thr Ala Asn 35 40 45

Cys Arg Asp Val Asn Glu Cys Leu Thr Ile Pro Glu Ala Cys Lys Gly 50 60

Glu Met Lys Cys Ile Asn His Tyr Gly Gly Tyr Leu Cys Leu Pro Arg 65 70 75 80

Ser Ala Ala Val Ile Asn Asp Leu His Gly Glu Gly Pro Pro Pro 85 90 95

Val Pro Pro Val Asn Thr Gln Pro Leu Pro Thr Gly Tyr Glu Pro Asp 100 105 110

Asp Gln Asp Ser Cys Val Asp Val Asp Glu Cys Ala Gln Ala Leu His 115 120 125

Asp Cys Arg Pro Ser Gln Asp Cys His Asn Leu Pro Gly Ser Tyr Gln 130 140

Cys Thr Cys Pro Asp Gly Tyr Arg Lys Ile Gly Pro Glu Cys Val Asp 145 150 155 160

Ile Asp Glu Cys Arg Tyr Arg Tyr Cys Gln His Arg Cys Val Asn Leu 165 170 175

Pro Gly Ser Phe Arg Cys Gln Cys Glu Pro Gly Phe Gln Leu Gly Pro 180 185 190

Asn Asn Arg Ser Cys Val Asp Val Asn Glu Cys Asp Met Gly Ala Pro 195 200 205 Cys Glu Gln Arg Cys Phe Asn Ser Tyr Gly Thr Phe Leu Cys Arg Cys 210 215 220

His Gln Gly Tyr Glu Leu His Arg Asp Gly Phe Ser Cys Ser Asp Ile 225 235 240

Asp Glu Cys Ser Tyr Ser Ser Tyr Leu Cys Gln Tyr Arg Cys Val Asn 245 250 255

Glu Pro Gly Arg Phe Ser Cys His Cys Pro Gln Gly Tyr Gln Leu Leu 260 265 270

Ala Thr Arg Leu Cys Gln Asp Ile Asp Glu Cys Glu Ser Gly Ala His 275 280 285

Gln Trp Ser Glu Ala Gln Thr Cys Val Asn Phe His Gly Gly Tyr Arg 290 295 300

Cys Val Asp Thr Asn Arg Cys Val Glu Pro Tyr Ile Gln Val Ser Glu 305 310 315 320

Asn Arg Cys Leu Cys Pro Ala Ser Asn Pro Leu Cys Arg Glu Gln Pro 325 330 335

Ser Ser Ile Val His Arg Tyr Met Thr Ile Thr Ser Glu Ala Glu Arg 340 345 350

Pro Ala Asp Val Phe Gln Ile Gln Ala Thr Ser Val Tyr Pro Gly Ala 355 360 365

Tyr Asn Ala Phe Gln Ile Arg Ala Gly Asn Ser Gln Gly Asp Phe Tyr 370 380

Ile Arg Gln Ile Asn Asn Val Ser Ala Met Leu Val Leu Ala Arg Pro 385 390 395 400

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Phe Val Gly Ala Tyr Thr Phe

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<213> Artificial sequence

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Pro Ser Ser Arg Ser Ser Lys Pro Arg Lys Gly Met Gly Thr Asn Leu 35 40 45

Ser Val Pro Asn Pro Leu Gly Phe Phe Pro Asp His Gln Leu Asp Pro

Ala Phe Gly Ala Asn Ser Asn Asn Pro Asp Trp Asp Phe Asn Pro Val 65 70 75 80

Lys Asp Asp Trp Pro Ala Ala Asn Gln Val Gly Val Gly Ala Phe Gly 85 90 95

Pro Arg Leu Thr Pro Pro His Gly Gly Ile Leu Gly Trp Ser Pro Gln 100 105 110

Ala Gln Gly Ile Leu Thr Thr Val Ser Thr Ile Pro Pro Pro Ala Ser 115 120 125 Thr Asn Arg Gln Ser Gly Arg Gln Pro Thr Pro Ile Ser Pro Pro Leu 130 135 140

Arg Asp Ser His Pro Gln Ala Met Gln Trp Asn Ser Lys Leu Asp Pro 145 155 160

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 $170\,$ $175\,$

Glu Gln

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<211> 29

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic peptide

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